

Application No. 10/053,467

Amendment and Response dated October 27, 2005

Reply to Office Action of July 27, 2005

REMARKS

Upon entry of this amendment, claims 1, 2, 4-7 and 9-12 are pending. No claims have been amended.

**Claim Rejections Under 35 U.S.C. § 102(e)**

Applicant thanks the Examiner for withdrawing the previous rejection under 35 U.S.C. § 112. However, claims 1-2, 4-7 and 9-12 are again rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,432,585 to Kawakami. Applicant respectfully traverses and, for the following reasons, requests reconsideration and withdrawal of this rejection.

In Applicant's Response dated May 6, 2005, Applicant stated:

"The atomic weights of the constituents are as follows: Cu = 64; Sn = 119; and In = 115. In a composition A:B:C, where B is at its highest weight percentage and C is at its lowest, wherein A is present at 59%, B at 40% and C at 1 %, the atomic ratio of A:B:C is  $59/64 : 40/119 : 1/115 = 0.922 : 0.336 : 0.009 = 0.728 : 0.265 : 0.007$ . Thus, the atomic ratio of B is 26.5% not 10% as asserted in the Office Action. This is well outside Applicant's claimed composition element B being present at 5-40% by weight."

See Response, p. 5. Although this statement is correct as it refers to one non-limiting example of Applicant's invention, the Examiner has interpreted this statement to mean the following in the Office Action dated July 27, 2005:

"The atomic balance of the composition requires that Sn is present at about 90 atomic % which according to Applicants calculation is an atomic ratio of 26.5%. The atomic ratio of 26.5% falls within the range of 5 to 40%, therefore anticipating the instant claim."

See Office Action, p. 4. Applicant respectfully submits that although the previous calculation correctly provides an atomic ratio of 26.5%, this does not mean that the "atomic ratio of 26.5% falls within the range of 5 to 40%." The claimed range of 5 to 40% refers to **weight %** and **not the atomic ratio**.

Kawakami does not teach or suggest the material of independent claim 1 or the battery of independent claim 6 comprising 5 to 40 **weight %** Sn. In fact, the composition of Kawakami cannot have a Sn content less than 50 weight %. In col. 16, ll. 10-12 Kawakami states that "[w]hen the Sn content is less than 50%, a problem is liable to entail in that the amount of lithium

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to be taken-in is diminished to decrease the battery capacity." Accordingly, Applicant's claimed material and battery comprising 5 to 40 weight % Sn is clearly not provided by Kawakami, and in fact teaches away from the present invention.

In addition, the Examiner interprets Kawakami to teach a material and battery comprising "about 90 atomic %" Sn from the following section of Kawakami Example 31 at col. 52, ll. 58-60:

"As a result, the tin powder thus treated was found to contain Bi and Cu respectively in an amount of about 10 atomic %."

Applicant respectfully suggests that this text means that Sn comprises about 80 atomic % of the tin powder, Bi comprises about 10 atomic % and Cu comprises about 10 atomic % (with the term "respectively" referring to 10 atomic % for each of Bi and Cu). Using this understanding, the atomic percentages of a 100 mol Kawakami composition translates to weight percentages of the individual components by the following:

Composition A-B-C	100 mol* Composition	Atomic Weight (g/mol)	Component weight (g)	Weight %
Cu -- 10 atomic %	10 mol Cu	63.55	635.5	5.2
Sn -- 80 atomic %	80 mol Sn	118.7	9496	<b>77.7</b>
Bi -- 10 atomic %	10 mol Bi	209	2090	17.1
			12221.5 g Total	100% Total

\* 1 mol =  $6.022 \times 10^{23}$  atoms (Avogadro's number)

According to this table, a 100 mol Kawakami composition having 80 mol Sn (80 mol Sn is 80 atomic % of a 100 mol composition) when multiplied by its atomic weight of 118.7 g/mol provides 9496 g Sn in the composition. Because the 100 mol Kawakami Cu/Sn/Bi composition weighs a total of 12221.5 g, Sn in turn comprises 77.7 weight % of the total Kawakami composition.

Claims 1 and 6 of the present invention provide a material and battery comprising composition A-B-C containing a first element A, a second element B, and a third element C. A-B-C can contain 5 to 40% *by weight* of the second element B which can be Sn. As determined from the example above, Kawakami Example 31 provides a composition having 77.7 % Sn by weight, but does not provide a material or battery which contains 5 to 40% *by weight* of Sn as recited in claims 1 and 6.

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Accordingly, Kawakami clearly does not provide a second element content of 5 to 40% by weight. Because Kawakami does not provide all of the elements of Applicant's Claims 1, 2, 4-7, and 9-12, it cannot anticipate the invention as claimed. In addition, Kawakami teaches away from the present invention and that reference cannot render the present invention obvious.

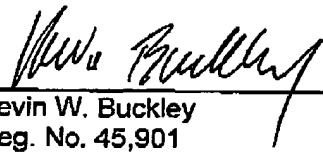
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CONCLUSION

Applicant respectfully requests withdrawal of the rejections and believes that the claims as presented represent allowable subject matter. Applicant requests the Examiner to note the new Attorney information provided below. If the Examiner desires, Applicant welcomes a telephone interview to expedite prosecution. Applicant believes there is no fee due at this time. However, the Commissioner is hereby authorized to deduct any deficiency or credit any overpayment to Deposit Account No. 19-3140.

Respectfully submitted,

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